SONY

3-810-938-11(1)

Mini Hi-Fi Component System

Operating Instructions

COMPACT disc DIGITAL AUDIO

MHC-881/G88

©1996 by Sony Corporation

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

NOTICE FOR THE CUSTOMERS IN THE U. S. A.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of *sufficient magnitude to constitute a risk of* electric shock to persons.

This symbol is intended to alert the user to the *presence of important operating and* maintenance (servicing) instructions in the literature accompanying the appliance.

Owner's Record

The model and serial numbers are located on the rear panel. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.
Model No. MHC-881 Serial No. _____

INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note on CATV system installer:

This reminder is provided to call CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

CAUTION

The use of optical instruments with this product will increase eye hazard.

NOTICE FOR THE CUSTOMERS IN CANADA

CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

Welcome!

Thank you for purchasing the Sony Mini Hi-Fi Component System. This series is packed with fun features. Here are just a few:

- DBFB (Dynamic Bass Feedback) system that boosts low frequency range audio provide deep, powerful bass sound
- A preset feature that lets you store and recall up to 30 of your favorite radio stations
- An amplifier that lets you adjust the audio quality to fit a variety of music types and environments
- A timer that lets you set the CD player, tape player or radio to turn on and off whenever you want
- A dual tape deck that lets you record from the radio, CD player or from the other tape deck and relay play from both decks
- A CD player that lets you play up to three CDs in a row and seamlessly advance (or reverse) through all the tracks on all the discs on the CD tray
- A music clip feature that lets you create groups of favorite tracks from your CDs
- A remote that lets you control your system from your seat
- A loop edit feature that lets you play a CD with sound effect like sampler play
- The MHC-881 consists of following things:
  — Main unit: HCD-H881
  — Speaker system: Front speaker SS-H991
  Surround/sub speaker SS-SR10P (Canadian model)
  SS-SR991 (U.S. model)

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Chapter 1: Setting Up

Connecting the Stereo

Inserting the Batteries

Setting the Clock

Connecting the Stereo

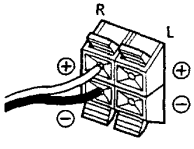
Use the illustrations below to connect your stereo.
If you want to connect any optional components to the stereo, see "Connecting Optional Equipment" in Chapter 6.

STEP 1 Connecting the Speakers

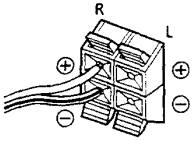
After arranging both ends of the speaker cables, connect all speakers to the unit.

Before connecting the speakers
Twist the speaker cable coating and strip it from the end of the cable.

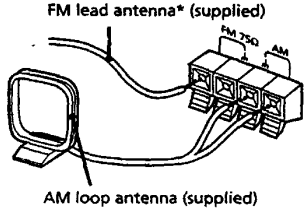
To connect the front speakers
Connect the right front speaker to the SPEAKER R connectors and the left front speaker to the SPEAKER L connectors with the red cords to ⊕ and the black cords to ⊖.



To connect the surround/sub speakers
Connect the right rear speaker to the SURROUND/SUB SPEAKER R connectors and the left rear speaker to the SURROUND/SUB SPEAKER L connectors with the gray cords to ⊕ and the gray with black stripes cords to ⊖.

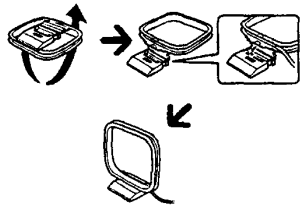


STEP 2 Connecting the Antennas



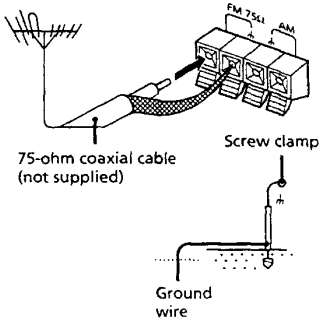
* Note: Extend it horizontally

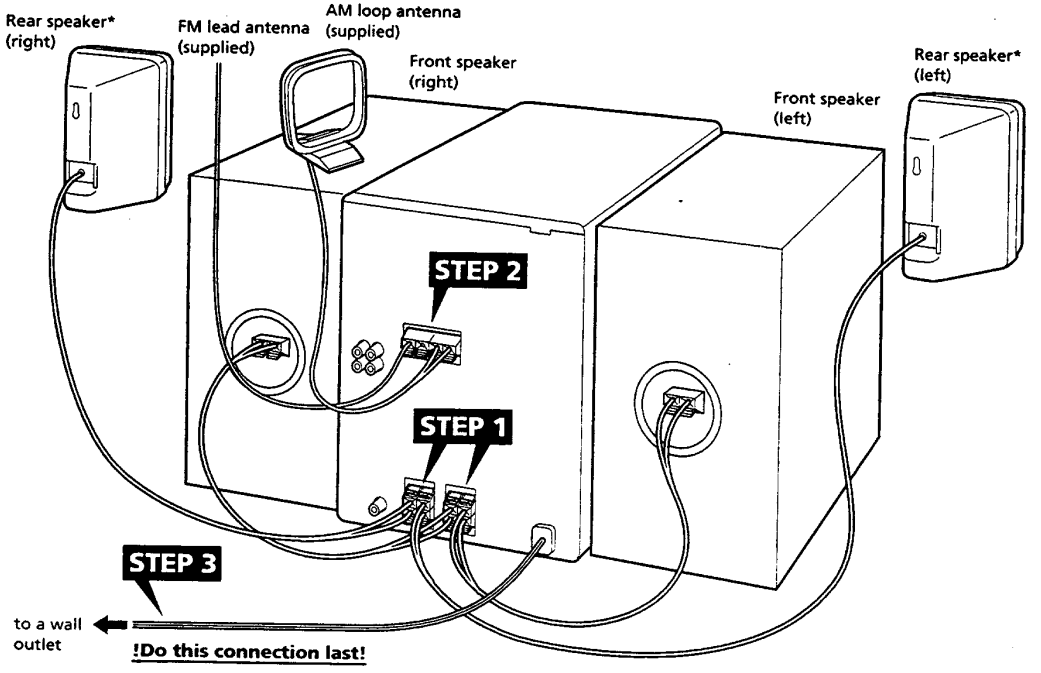
AM loop antenna connection
Connect the supplied loop antenna to the AM and the ⏚ terminals.



To improve the FM reception
Connect an external FM antenna to the FM 75Ω and ⏚ terminals, using a 75-ohm coaxial cable.

Important
Ground the external antenna from ⏚ terminal against lightning with the screw clamp. To prevent a gas explosion, do not connect the ground wire to a gas pipe.

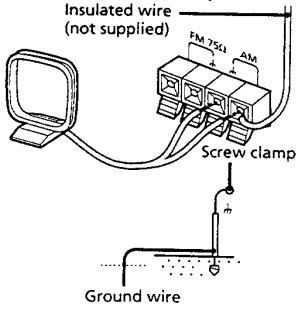




*For the customers in the U.S.A.
SS-SR10P is the model used for illustration purpose. However, connections of SS-SR10P are the same as those of SS-SR991.

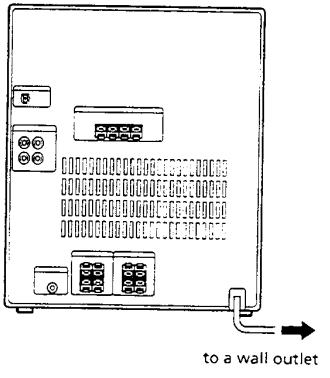
To improve the AM reception
After you connect the AM antenna, connect a 6- to 15-meter (20- to 50-feet) insulated wire to the AM terminal. Connect the ⏚ terminal to earth.

Important
Ground the external antenna against lightning from the ⏚ terminal. To prevent a gas explosion, do not connect the ground wire to a gas pipe.



STEP 3 Connecting the Power

Connect the AC power cord to a wall outlet after you have made all the above connections.

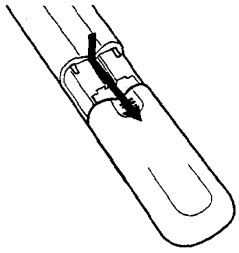


Demo mode
The demo mode appears in the display when you connect the AC power cord to a wall outlet.
To deactivate the demo mode, press DISPLAY/DEMO with the system power turned off.

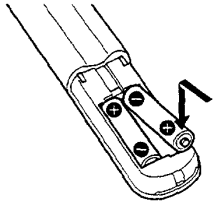
Inserting the Batteries

Install two R6 (size AA) batteries in the supplied remote for remote control.

1 Open the lid.



2 Insert two R6 (size AA) batteries. Match the + and – indications to the diagram in the battery compartment.



3 Close the lid.

Battery life

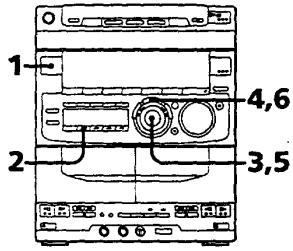
You can expect the remote to operate for about six months (using Sony SUM-3 (NS) batteries) before the batteries run down. When the batteries no longer operate the remote, replace all the batteries with new ones.

To avoid battery leakage

If you are not going to use the remote for a long time, remove the batteries to avoid damage caused by corrosion from battery leakage.

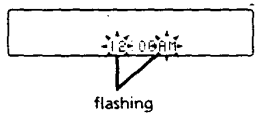
Setting the Clock

The built-in clock shows the time in the display even if the power is off. You need to set the clock to utilize the timer-activated features of your stereo system.
Use the buttons on the unit to do this operation.



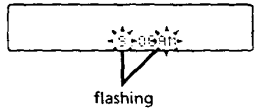
1 Press TIMER.

2 Press CLOCK SET.
The "AM" and hour indication begin flashing.



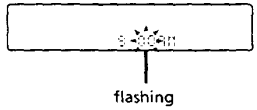
flashing

3 Set the current hour by turning the JOG dial until the correct hour appears.



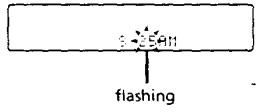
flashing

4 Press ENTER/NEXT.
The minutes indication begins flashing.



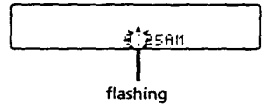
flashing

5 Set the current minute by turning the JOG dial until the correct minute appears.



flashing

6 Press ENTER/NEXT.
The clock starts running and the upper dot flashes. Use the time signal to set the clock accurately.
The upper dot flashes for the first half of a minute (0 to 29 seconds), and the lower dot flashes for the last half of a minute (30 to 59 seconds).



flashing

To check the time

Press DISPLAY/DEMO a few times.
The current time is displayed for eight seconds.

To correct the clock setting

Repeat steps 1 through 6.

Chapter 2: the CD Player

Playing CDs (normal play)

Playing Tracks in Random Order (shuffle play)

Playing Tracks in the Desired Order (program play)

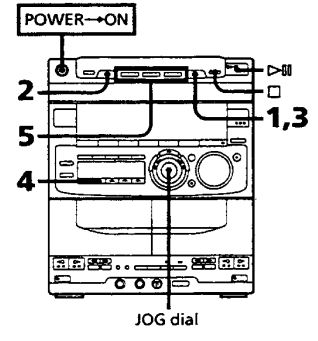
Playing Tracks Repeatedly (repeat play)

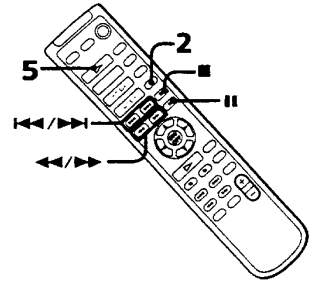
Grouping Tracks (music clip)

Playing Tracks: Repeating a Specified Portion (loop play)

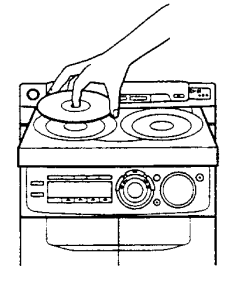
Playing CDs (normal play)

You can play all the tracks on up to three discs consecutively in their original order (normal play).
You can play 12 cm and 8 cm CDs. If the CD is supplied with an adaptor, remove it before playing the CD.
Before you play the CD, decrease the sound level by turning the VOLUME control counterclockwise, to prevent damage to the speakers.
Use the buttons both on the unit and the remote to do this operation.





1 Press ⏏ OPEN/CLOSE and place up to two CDs (with the label side facing up) on the disc tray.

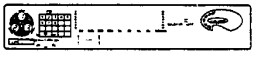


2 Press DISC SKIP EX-CHANGE (or D.SKIP on the remote) to insert a third disc, if necessary.
The disc tray rotates so that you can place another CD.

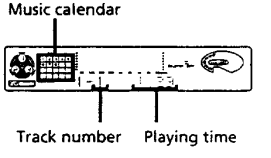
3 Press ⏏ OPEN/CLOSE again to close the disc tray.

4 Press 1/ALL DISCS to choose "1 DISC" or "ALL DISCS".

Choose	To play
1 DISC	Only the CD you have selected.
ALL DISCS	All CDs consecutively in order of disc number. Empty disc trays are skipped.



5 Press one of the DISC 1 – 3 buttons to select the disc tray.
Play starts from the CD loaded on the tray whose button is lit green.



To	Press
Stop play	□ (■*1)
Pause	▷II (II*1)
Resume play	▷II (CD ▷*1 or II*1)
Go forward to another track	During play or pause, rotate the JOG dial clockwise. Release when you reach the track you desire.*2 Or use AMS*1 ▷▷I on the remote.
Go back to a previous track	During play or pause, rotate the JOG dial counterclockwise. Release when you reach the track you desire.*2 Or use AMS*1 I◁◁ on the remote.
Select a CD directly	Corresponding DISC 1 – 3 button*4 or press DISC SKIP EX-CHANGE repeatedly in stop mode
Remove the CD	⏏ OPEN/CLOSE
Exchange other CDs while playing	DISC SKIP EX-CHANGE

continue to next page →

→ continued

*1 Remote
*2 You can use the JOG dial to search quickly through tracks on different discs (seamless feature).
*3 Automatic Music Sensor
*4 If no disc is loaded at that number, the tray will emerge.

DISC SKIP EX-CHANGE functions differently depending on a different situation.
To select a particular CD, press DISC SKIP EX-CHANGE while you stop playing a CD. To remove or exchange CDs while playing or pause playing a CD, press DISC SKIP EX-CHANGE.

To find a point in a track
You can find a particular point in a track while the track is playing or while it's in pause mode. Use the buttons on the remote to operate this feature.

To	Press
Go forward quickly in a track	▶▶ on the remote and release it at the desired point.
Go backwards quickly in a track	◀◀ on the remote and release it at the desired point.
Search quickly without listening	⏸, then press ◀◀ or ▶▶ on the remote. Press CD ▷ or ⏸ again at the desired point.

To check the remaining time during playback
Press DISPLAY/DEMO repeatedly. Each time you press the button, the display changes as follows:

→ Playing time on the current track
↓
Remaining time on the current track
↓
Remaining time on the current CD*1 or "Play" display*2
↓
Clock display (for eight seconds)
↓
Effect (or P FILE) name or "EFFECT ON (OFF)"

*1 1 DISC mode
*2 ALL DISCS mode

To check the total playing time and the total number of tracks
Press DISPLAY/DEMO in stop mode. When you press DISPLAY/DEMO again, the display shows the clock display for eight seconds and returns to the previous indication.

Notes
- You cannot check the total playing time during program play.
- The disc number, total playing time and number of tracks also appear in the display when you press ⏏ OPEN/CLOSE to close the disc tray.
- "–.–" appears in the display when the total playing time is 100 minutes or more.

One Touch Play feature
Press ▷⏸ on the CD player (or CD ▷ on the remote) when the power is off. When a CD is in the player, you will be able to start listening to the CD without pressing any other buttons.

The Music Calendar Display
This display lights according to the number of tracks on the CD. As each track is played, the corresponding number disappears. Tracks numbered in excess of 20 are not displayed.

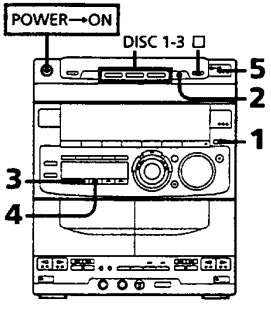
What the green and orange DISC 1-3 button indicators indicate
Indicators are provided on the DISC buttons for each of the respective disc trays (DISC 1-3).
- A green indicator shows that the tray is selected (either during playback or standby, or when the tray is open) no matter if there is a CD inside or not.
- An orange indicator shows that there is a CD on the tray but the tray is not selected.
- When the indicator is off, there is no CD on the tray and the tray is not selected.

Automatic Source Selection
If the CD player has been in the normal play mode, you can select the CD player just by pressing ▷⏸ or the DISC 1 – 3 buttons.
If the CD player has been in the program play or the shuffle play mode, only ▷⏸ can be used for this function.

If there is no CD in the player
"CD NO DISC" appears in the display. Press ▷⏸ (or CD ▷ on the remote) while the indication is on, then the disc tray will open automatically.

Playing Tracks in Random Order (shuffle play)

You can play all the tracks on one CD or all CDs in random order.
Use the buttons on the unit to do this operation.

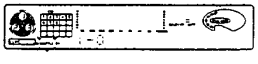


1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press ⏏ OPEN/CLOSE and place the CDs on the disc tray. Then, press ⏏ OPEN/CLOSE again to close the disc tray.

3 Press 1/ALL DISCS to choose "1 DISC" or "ALL DISCS".

4 Press PLAY MODE repeatedly until "SHUFFLE" appears in the display.



5 Press ▷⏸.
"🔀" appears and then all the tracks play in random order.

To stop shuffle play
Press □ on the CD player.

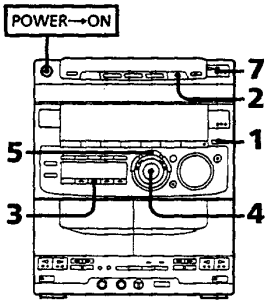
To cancel shuffle play
Press PLAY MODE repeatedly until "SHUFFLE" or "PROGRAM" disappears from the display. The tracks continue playing in their original order.

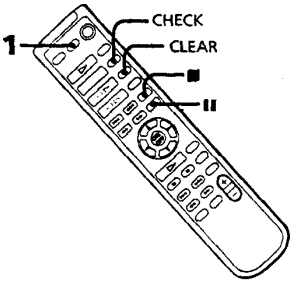
To select a desired CD
Press DISC 1 – 3 during shuffle play.

To skip an undesired track
Turn the JOG dial clockwise (or press ▶▶| on the remote).

Playing Tracks in the Desired Order (program play)

You can make a program of up to 32 tracks from all the CDs in the order you want them to be played.

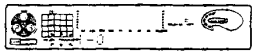




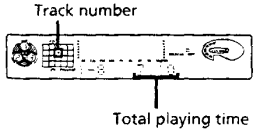
1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press ⏏ OPEN/CLOSE and place the CDs on the disc tray. Then, press ⏏ OPEN/CLOSE again to close the disc tray.

3 Press PLAY MODE repeatedly until "PROGRAM" and "DISC" appear in the display.



4 Turn the JOG dial to choose a track.
The track number and the total playing time appear.



5 Press ENTER/NEXT.
The chosen track number lights up in the music calendar. If the track number and the total playing time disappear before you press ENTER/NEXT, go back to step 4.

6 Repeat steps 4 and 5 to program the remaining tracks you want to play in the order you want them to play.

7 Press ▷II.
All the tracks play in the order you choose.

To	Press
Check the program	CHECK on the remote repeatedly*1
Program a pause	II on the remote*2
Stop play	□ (■ on the remote)
Cancel program play	PLAY MODE*3 repeatedly until "PROGRAM" or "SHUFFLE" dissapear
Erase a track from the end	CLEAR on the remote in stop mode
Erase a specific track	CHECK on the remote repeatedly so that the number of the track lights up, and press CLEAR on the remote
Erase the entire program	□ (■ on the remote) once in stop mode or twice while playing

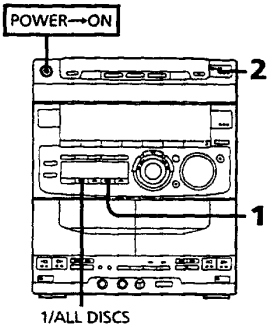
*1 After the last track appeared "CHECK END" appears in the display.
*2 "P" appears and the total playing time is reset to 0.00.
*3 The program is erased.

To change the order of programmed tracks
To change the order, erase the entire program and create a new one.

Notes
- The program you made remains in the CD player even after it has been played back. Press ▷II to play the same program again.
- If "--.--" appears instead of the total playing time during programming, this means:
  - you have programmed a track number which exceeds 20, or
  - the total playing time has exceeded 100 minutes.

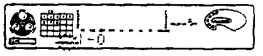
Playing Tracks Repeatedly (repeat play)

The repeat play function repeats a single CD or all CDs in normal play, shuffle play and program play.
Use the buttons on the unit to do this operation.



Repeating all the tracks

1 Press REPEAT a few times until "REPEAT" appears in the display.



2 Press ▷II.

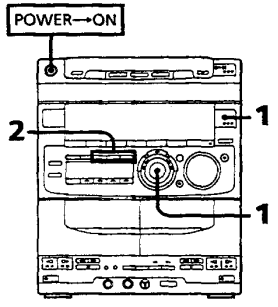
To	Press
Repeat all the tracks on the current CD	1/ALL DISCS repeatedly until "1 DISC" appears in the display.
Repeat all the tracks on all CDs	1/ALL DISCS repeatedly until "ALL DISCS" appears in the display.
Repeat only one track (in normal play only)	REPEAT repeatedly until "REPEAT 1" appears in the display while playing the track you want to repeat.

To cancel repeat play
Press REPEAT so that "REPEAT" or "REPEAT 1" disappears from the display.

Grouping Tracks (music clip)

The music clip function is an easy way to pr oduce up to three groups of tracks from your CDs. For example, you could store tracks for the morning in CLIP A, tracks to play for your friends in CLIP B, and tracks for relaxing in CLIP C.
Once you store one or more tracks in a music clip(s), the player recalls those tracks whenever you play the respective disc.

Storing Tracks in a Clip



1 Play the track you want to store, or (in stop mode) use the JOG dial to select the track you want.

2 Press CLIP button (A, B or C).
"CLIP FILE" appears and the selected CLIP indicator (A, B or C) appears in the display. Normal playback continues.

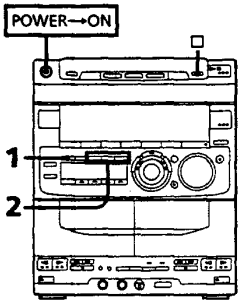
3 Repeat steps 1 and 2 to store other tracks into the same or a different clip.

If the memory becomes full
You can store tracks from up to ten different CDs (one or more tracks per CD) to each clip data.
The clip data for the oldest clip is erased to make room for a new clip.

Notes
- Only tracks numbered 1 – 20 can be stored in music clips. You cannot store tracks numbered 21 or more.
- In stop mode, you cannot store tracks if "SHUFFLE" or "PROGRAM" is displayed.

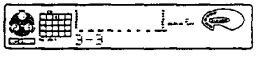
Playing Tracks in a Clip (CLIP PLAY)

CLIP indicator(s) light in the display to let you know when clips are stored for a disc.



1 Press CLIP PLAY.

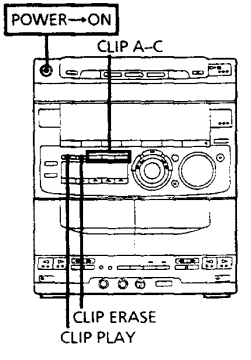
2 Press CLIP button (A, B or C).
"CLIP PLAY" appears in the display and the selected CLIP indicator lights up.
The player starts playing tracks from the selected clip.



To cancel clip play
Press □ on the CD player.

Notes
- In 1 DISC mode, the tracks stored for the selected disc are played back once, then clip play is released.
- In ALL DISCS mode, all the tracks stored for the currently loaded discs are played back once, then clip play is released.
- You cannot start CLIP play if "PROGRAM" is displayed.

Erasing Tracks from a Clip



Erasing one track
1 Press CLIP PLAY.
2 Press CLIP button (A, B or C) for the clip containing the track you want to erase.
3 Use the JOG dial to select the track you want to erase.
4 Press CLIP ERASE.
"ERASE A – C" and "TRACK" appear alternately in the display.
5 Press CLIP button (A, B or C) you pressed on step 2.

Erasing all the tracks in a CLIP A (B or C)
1 In stop mode, press CLIP ERASE.
"ERASE A – C" and "ALL A – C" appear alternately in the display.
2 Press CLIP button (A, B or C) to specify the clip you want to erase. "PUSH A (B or C)" appears in the display.
3 Press CLIP button you pressed on step 2 again. "ERASE ALL" appears in the display and CLIP indicator disappears.

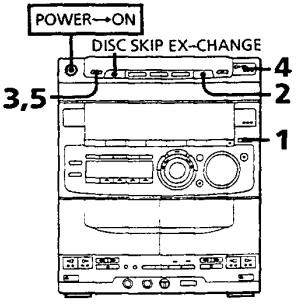
Playing Tracks : Repeating a Specified Portion (loop play)

You can use the loop function to record from a CD to a tape with the sampler play. Use the buttons both on the unit and remote to do this operation.

EXAMPLE

Original song:
"Hey, come on everybody!"

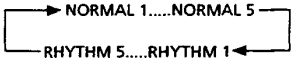
When you use the loop function:
"Hey, come come come come come on everybody!"



1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press ⏏ OPEN/CLOSE and place a CD. Then, press ⏏ OPEN/CLOSE again to close the disc tray.
If the button for the disc tray containing the CD you want to record on is not lit green, press DISC SKIP EX-CHANGE repeatedly so that it lights green.

3 Press LOOP repeatedly to select NORMAL or RHYTHM (as for NORMAL and RHYTHM, see "What is the difference between NORMAL and RHYTHM?" for details).
NORMAL or RHYTHM has five modes respectively, depending on the interval you want. The display changes as follows:



The interval (about 0.25 to 1.00 second) is longer as the number is bigger.

4 Press ▷II.

5 Press and hold down LOOP when a portion you want to repeat is played and release when you want to stop repeating it.

What is the difference between NORMAL and RHYTHM?
There is a difference between NORMAL and RHYTHM in restarting point of normal play when the loop effect ends.
Select NORMAL or RHYTHM while stop playing or pause playing.

NORMAL
Normal CD play resumes from the same point as you have started the loop play when you release LOOP button.

RHYTHM
The portion over-ridden by the loop effect will be skipped and then normal play resumes.

Chapter 3: the Radio

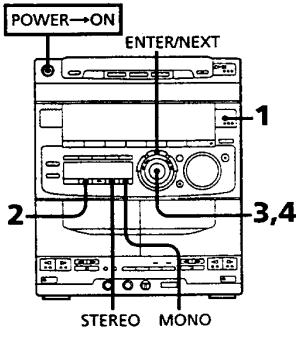
Listening to the Radio

Presetting Radio Stations

Playing Preset Radio Stations

Listening to the Radio

When you want to play a radio program, you can have the tuner automatically scan the radio frequencies and tune in the stations with clear signals. This feature saves you time in searching for stations with clear signals. However, stations with weak signals may be skipped by automatic tuning. Manually tune in the ones skipped by automatic tuning.

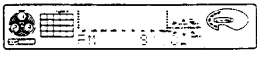


1 Press TUNER/BAND repeatedly until the band you want appears in the display.
As you press TUNER/BAND, the band changes as follows:

FM ⟷ AM

2 Press TUNING MODE repeatedly until "AUTO" appears in the display.

3 Turn the JOG dial clockwise to scan a higher frequency station. To tune in a lower frequency station, turn the JOG dial counterclockwise.
The tuner starts scanning radio frequencies, and stops automatically when it finds a clear station.
"TUNED" appears in the display.
"STEREO" also appears if the tuned FM station is broadcasting in stereo.



4 If you do not want to listen to the station selected, turn the JOG dial again to restart the scan.

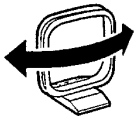
When the desired station is not tuned in

Automatic tuning may skip stations with a weak signals. Tune in the station manually.

1 Press TUNING MODE repeatedly until "MANUAL" appears in the display.
2 Keep turning the JOG dial until the desired station is tuned in.

To improve AM broadcast reception

Reorient the supplied AM loop antenna for AM.



AM

To change the AM tuning interval

The AM tuning interval is preset to 10 kHz in the factory. If you need to change the interval, do as follows:

1 Turn on the power.
2 Change the band to AM.
3 Turn off the power.
4 Turn the power back on while pressing ENTER/NEXT.

After changing the AM tuning interval, reset the preset radio stations. To reset the interval to the factory setting, follow the same procedure.

When an FM program is not clear to receive

Press MONO so that "MONO" appears in the display. There will be no stereo effect, but the reception will improve. Press STEREO again to restore the stereo effect.

One Touch Play feature

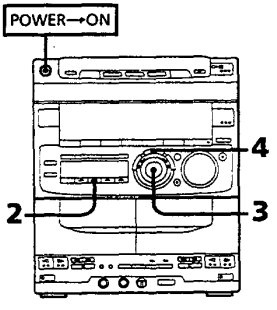
Press TUNER/BAND when the power is off. You can listen to the last received station without pressing any other buttons.

Automatic Source Selection

If you press TUNER/BAND while you are listening to other sound source, the tuner is selected and the last received station plays automatically.

Presetting Radio Stations

You can store radio frequencies in the tuner's memory to tune in your favorite stations quickly. You can preset up to 20 FM stations and 10 AM stations.
Use the buttons on the unit for presetting stations.



1 Tune in a station you want to store in the preset memory.

2 Press TUNER MEMORY.
"MEMORY" and the preset channel number appear in the display.

Preset channel number

3 Turn the JOG dial to select a preset channel number.

4 Press ENTER/NEXT.
The station is stored at the preset channel number you have decided on.

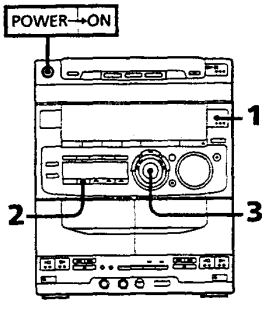
5 Repeat steps 1 to 4 for each station you want to store.

To erase a stored station
Store a new station at a previously used preset channel number. It will erase the old station and replace it with the new station.

If you have trouble storing a station or if you made a mistake
Make sure "MEMORY" is lit in the display. If not, press TUNER MEMORY again so that "MEMORY" appears (for about eight seconds) in the display, and then proceed with steps 3 and 4.

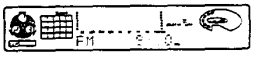
Playing Preset Radio Stations

Once you have preset the stations, use the JOG dial to quickly tune in your favorite stations.

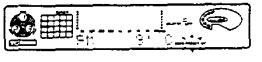


1 Press TUNER/BAND repeatedly to select the band you want.

FM ⟷ AM



2 Press TUNING MODE so that "PRESET" appears in the display.



3 Turn the JOG dial (or press ⏮ or ⏭ on the remote) to tune in a preset station.
The station frequency appears and the station begins broadcasting.

Chapter 4: the Tape Player

Playing a Tape

Recording a CD

Recording a CD: Selecting Tape Length Automatically (tape select edit)

Recording a CD: Specifying Tape Length (time edit)

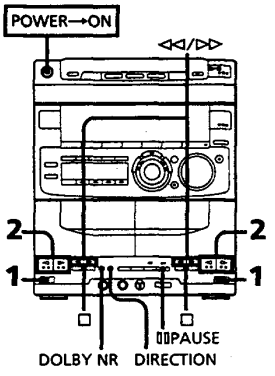
Recording a CD: Specifying Track Order (program edit)

Recording From the Radio

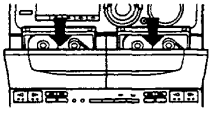
Recording From Another Tape (dubbing)

Playing a Tape

You can use TYPE I (normal), TYPE II (CrO_2) and TYPE IV (metal) tapes. When you insert a tape, the deck detects the tape type automatically.



1 Press ≙ EJECT to open tape compartment.
Insert a recorded tape in deck A or B with the tape side down and the side you want to play facing forward. Push to close the compartment. The tape will start playing from the front side.



2 Press ▷ (to play the front side) or ◁ (to play the reverse side).
The tape starts playing.

To play	Press DIRECTION to select
One side of the tape	⇌
Both sides*1	⇄
Both decks in succession*1 *2	RELAY

*1 The deck stops automatically after repeating the sequence 5 times.
*2 See "To play both decks in succession (relay play)".

To	Press
Stop play	□ (■*)
Pause	□□ PAUSE (□□*),(B DECK)
Resume play after pause	□□ PAUSE (□□*), ◁ or ▷(DECK B ◁/▷*)
Fast forward	▷▷ for front side ◁◁ for reverse side
Rewind	◁◁ for front side ▷▷ for reverse side
Remove the cassette	≙ EJECT

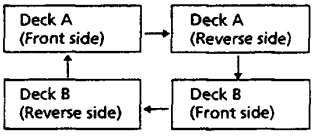
* Remote

To control with the remote

1 Press DECK A ▷ or DECK B ▷ to play the front side and press DECK A ▷ or DECK B ▷ to play the reverse.
2 Press the desired operation button.

To play both decks in succession (relay play)

Relay play always follows the following sequence. When the reverse side of the tape in deck B finishes playing, the following sequence continues four more times.



1 Press ≙ EJECT and insert recorded tapes in both decks.
2 Press DIRECTION repeatedly until "RELAY" appears in the display.
3 Press ◁ or ▷ on either deck.
To stop relay play, press □.

To cancel relay play

Press DIRECTION repeatedly until "⇌" or "⇄" appears in the display.

When listening to a tape recorded with the Dolby* B-type noise reduction system

Press DOLBY NR button so that "DOLBY NR B" appears in the display.
The setting affects both decks. Dolby noise reduction system reduces tape hiss noise in low-level high-frequency signals.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-DD symbol a are trademarks of Dolby Laboratories Licensing Corporation.

One Touch Play feature

Press ▷ or ◁ when the power is off.
You can listen to the tape without pressing any other buttons when a tape is in the deck. When a tape is not in the deck, the system will just turn on.

Automatic Source Selection

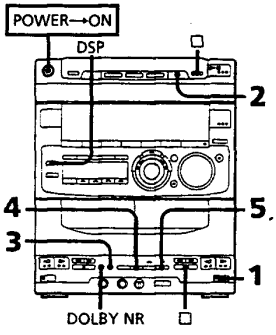
If you press ▷ or ◁ (or DECK A ▷ or DECK B ▷ on the remote) while you are listening to other sound source, the tape deck is selected and the play starts automatically.

Recording a CD

You can record from a CD to a tape.
Use TYPE I (normal) or TYPE II (CrO_2) tapes. Do not use TYPE IV (metal) tapes for recording.
To listen to other sources while recording, you must stop recording.

Recording a CD Automatically

By using CD SYNCHRO, you can record from a CD to a tape quickly.
Use the buttons on the unit to do this operation.



1 Press ⏏ EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording will start from the front side of the tape, unless you have changed the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

2 Press ⏏ OPEN/CLOSE and place a CD. Then, press ⏏ OPEN/CLOSE again to close the disc tray.
If the indicator for the disc tray containing the CD you want to record is not lit green, press DISC SKIP EX-CHANGE repeatedly so that it lights green.

3 Select dual or single-sided recording.

To record	Press DIRECTION to select
One side of the tape	⇉
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

4 Press CD SYNCHRO.
Deck B stands by for recording.

5 Press ⏸ PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts playing.

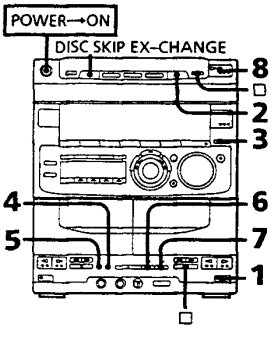
To stop recording
Press ■ on deck B or the CD player.

To add the surround effect
Press DSP so that SUR 1 ▮▮▮▮ or SUR 2 ▮▮▮▮ appears.
You can record the sound with surround effect.
The equalizer you adjusted will not be recorded.

To activate DOLBY NR
When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 3.

Recording a CD Manually

You can record a CD as you like, for instance, record just the songs you want or record from the middle of the tape.



1 Press ⏏ EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording will start from the front side of the tape, unless you have changed the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

2 Press ⏏ OPEN/CLOSE and place a CD. Then, press ⏏ OPEN/CLOSE again to close the disc tray.
If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP EX-CHANGE repeatedly so that it lights green.

3 Press FUNCTION to select the CD player.

4 Select dual or single-sided recording.

To record	Press DIRECTION to select
One side of the tape	⇉
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

5 When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display.

6 Press ● REC.
Deck B stands by for recording.

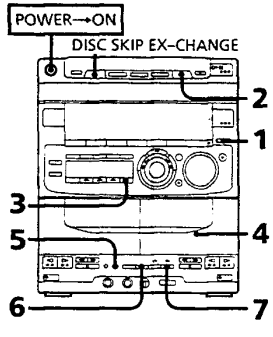
7 Press ⏸ PAUSE to release recording pause.
Recording starts.

8 Press ▷⏸ on the CD player.
The CD starts playing.

To	Press
Stop recording	■ on deck
Pause recording	⏸ PAUSE
Stop CD play	■ on the CD player
Pause CD play	▷⏸ on the CD player

Recording a CD: Selecting Tape Length Automatically (tape select edit)

You can have the stereo system select and indicate the most suitable tape length for recording each disc automatically.
You cannot use Tape Select Edit for discs which contain 21 tracks or more.



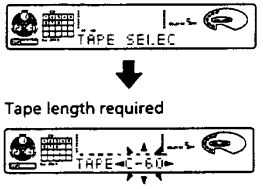
continue to next page →

→ continued

1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press ⏏ OPEN/CLOSE and place a CD. Then, press ⏏ OPEN/CLOSE again to close the disc tray.
If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP EX-CHANGE repeatedly so that it lights green.

3 Press EDIT.
"TAPE SELECT" appears and the player divides the selections automatically. Then the display changes as follows:



4 Insert a blank tape of the indicated length (or longer) into deck B.

5 Select dual or single-sided recording.

To record	Press DIRECTION to select
One side of the tape	⇉
Both sides*	⊂⊃ or RELAY

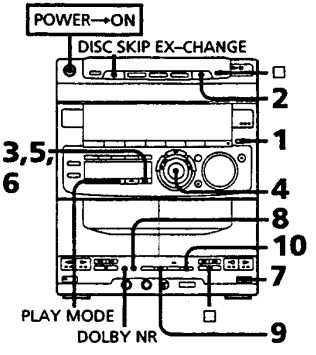
* Recording always stops at the end of the reverse side. Be sure to start from the front side.

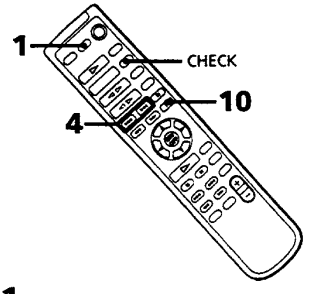
6 Press CD SYNCHRO.
Deck B stands by for recording.

7 Press ⏸ PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts playing.

Recording a CD: Specifying Tape Length (time edit)

You can have the stereo system create programs based on the tape length. The CD player makes programs that will fit the tape length. For example, if you use a 40-minute tape to record a 46-minute CD, the CD player will automatically choose tracks that will fit within the 40-minutes, filling as much of the tape as possible. The player will not program those tracks beyond track number 20. Use the buttons on both the unit and the remote to do this operation.



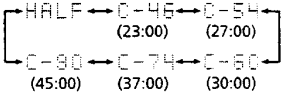


1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press ⏏ OPEN/CLOSE and place a CD. Then, press ⏏ OPEN/CLOSE again to close the disc tray.
If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP EX-CHANGE repeatedly so that it lights green.

3 Press EDIT twice.
"TIME EDIT" appears in the display. Then "SELECT" and "TIME" appear alternately in the display.

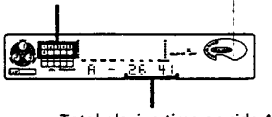
4 Turn the JOG dial (or press ⏮ or ⏭ on the remote) to designate the tape length.
Choose the indication for tapes of a corresponding minute length. Choose "HALF" if you want the CD player to play just half the total playing time of the CD without changing the order of the track.
As you turn the JOG dial or press the ⏮ or ⏭ on the remote, the indication changes as follows:



Note
You cannot select "HALF" when you want to record CD which has more than 20 tracks.

5 Press EDIT.
The CD player determines the tracks to be recorded on side A automatically.

Tracks to be recorded on side A



Total playing time on side A

6 When you want to record on both sides, press EDIT again.
The CD player determines the tracks to be recorded on side B.
When you want to record only on side A, press □ on the CD player to stop the indication from flashing.

7 Press ⏏ EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording will start from the front side of the tape, unless you have changed the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

8 Select dual or single-sided recording.

To record	Press DIRECTION to select
One side of the tape	⇉
Both sides*	⊂⊃ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

9 Press CD SYNCHRO.
Deck B stands by for recording.

10 Press ⏸ PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts playing.

To stop recording
Press □ on deck or the CD player.

To check the order
Press CHECK on the remote repeatedly. Each time you press CHECK, the number of the programmed tracks appear in the display.

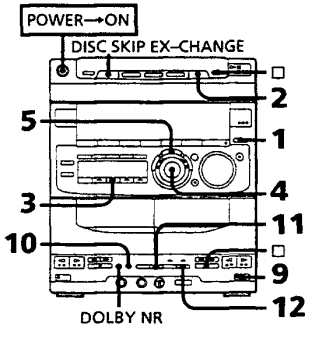
To cancel time edit
Press □ on the CD player and then press PLAY MODE.

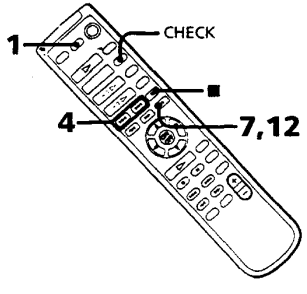
To select the desired tracks beforehand
You can place priority on some tracks to be recorded by selecting them before programming (only up to 20 tracks).
See "Playing Tracks in the Desired Order (program play)".

To activate DOLBY NR
When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 8.

Recording a CD: Specifying Track Order (program edit)

You can adjust the total recording time to the tape length while making a program. Use the buttons on both the unit and the remote to do this operation.





1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press ⏏ OPEN/CLOSE and place a CD. Then, press ⏏ OPEN/CLOSE again to close the disc tray.
If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP EX-CHANGE repeatedly so that it lights green.

3 Press PLAY MODE repeatedly until "PROGRAM" appears in the display.

4 Turn the JOG dial (or press ⏮ or ⏭ on the remote) to choose a track.

5 Press ENTER/NEXT.
The chosen track number lights up in the music calendar and is memorized. If the track number disappears before you press ENTER/NEXT, go back to step 4.

6 Repeat steps 4 and 5 to program the remaining tracks you want to record on side A in the order you want them to be recorded.

7 Press ⏸ on the remote to pause recording at the end of side A.
"P" appears in the display. The total playing time "0.00" is displayed.

8 Repeat steps 4 and 5 to program the remaining tracks you want to record on side B in the order you want them to be recorded.

9 Press ⏏ EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording will start from the front side of the tape, unless you have changed the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

10 Select dual or single-sided recording.

To record	Press DIRECTION to select
One side of the tape	⇉
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

11 Press CD SYNCHRO.
Deck B stands by for recording.

12 Press ⏸ PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts playing.

To stop recording
Press □ on deck B or the CD player.

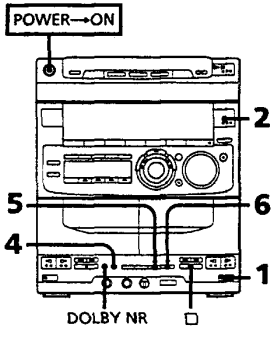
To check the order
Press CHECK on the remote repeatedly. Each time you press CHECK, the number of the programmed tracks appear in the display.

To cancel program edit
Press PLAY MODE repeatedly until "PROGRAM" disappears from the display.

To activate DOLBY NR
When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 10.

Recording From the Radio

You can record from the tuner onto a tape. Use TYPE I (normal) or TYPE II (CrO_2) tape.



1 Press ⏏ EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording will start from the front side of the tape, unless you have changed the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

2 Press TUNER/BAND several times until the desired radio band appears.

3 Tune in the radio station you want to record. (See "Listening to the Radio", or "Playing Preset Radio Stations" for details.)

4 Select dual or single-sided recording.

To record	Press DIRECTION to select
One side of the tape	⇉
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

5 Press O REC.
Deck B stands by for recording.

continue to next page →

→ continued

6 Press II PAUSE to release recording pause.
Recording starts.

To stop recording
Press □ on deck B.

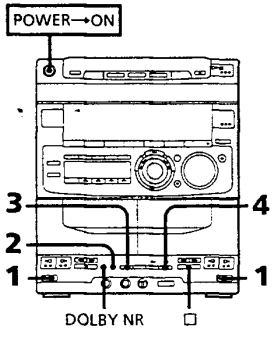
To reduce noise during AM recording
If a whistling noise is heard while recording, reorient the AM loop antenna for optimum reception.

To activate DOLBY NR
When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 4.

Recording From Another Tape (dubbing)

Dubbing Another Tape Automatically

You can record the whole tape onto another automatically by using high speed dubbing. Use the buttons on the unit to do this operation and TYPE I (normal) or TYPE II (CrO_2) tape for dubbing.



1 Press ⏏ EJECT and insert a recorded tape in deck A with the side you want to play facing forward.
Also, insert a blank tape in deck B with the side you want to record on facing forward.
Recording and playback will start from the front side of the tape, unless you have changed the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

2 Choose how you want the tape to record and press DIRECTION.

Indication	Operation
⇉	Dubbing stops at the end of one side.
⇄	When the tape in one deck comes to the end of the front side, it reverses immediately regardless of the tape position in the other deck.
RELAY	When the tape in one deck reaches its end of the front side, it stops until the other tape come to its end, and then both tapes reverse together.

3 Press HIGH SPEED DUBBING.
Deck B stands by for recording.

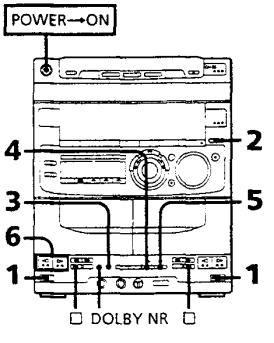
4 Press II PAUSE.
The tape starts dubbing at high speed. When the tape has started dubbing from the reverse side in RELAY and ⇄ mode, dubbing will stop at the end of the reverse side.

To stop dubbing
Press □ on deck B.

You do not have to press DOLBY NR at high speed dubbing
The tape in deck B is automatically recorded in the same state as the tape in deck A.

Dubbing Another Tape Manually

When you want to dub only part of the tape, dub manually at normal speed. Use TYPE I (normal) or TYPE II (CrO_2) tape for recording.



1 Press ⏏ EJECT and insert a recorded tape in deck A with the side you want to play facing forward.
Also, insert a blank tape in deck B with the side you want to record on facing forward.
Recording and playback will start from the front side of the tape, unless you have changed the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

2 Press FUNCTION repeatedly until "TAPE" appears in the display.

3 Select dual or single-sided recording.

To record	*Press DIRECTION to select*
One side of the tape	⇉
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

4 Press O REC.
Deck B stands by for recording.

5 Press II PAUSE to release recording pause.
Recording starts.

6 Press ▷ or ◁ on deck A to start playback.

To stop recording
Press □ on deck A and B.

Notes
- When dubbing tapes originally recorded with Dolby NR B, the dubbed tape is automatically recorded with Dolby NR B.
- When you want to record a tape recorded without Dolby NR B onto another tape using Dolby NR B, press DOLBY NR so that "DOLBY NR B" appears in the display before recording.

Chapter 5: Sound Adjustment

Adjusting the Sound

Selecting the Audio Emphasis

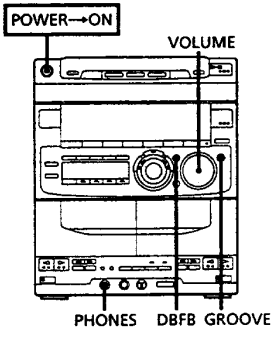
Adjusting the Audio Emphasis

Making a Personal Audio Emphasis File (personal file)

Switching the Speaker Formation (sonic formation)

Adjusting the Sound

To fully enjoy the sound coming from your stereo system, make the following audio adjustments. See the following sections for additional sound adjustments.



To adjust the volume
Turn VOLUME on the unit or press VOL (+/–) on the remote.

To reinforce bass
Press DBFB* repeatedly until "DBFB ▮▮" or "DBFB ▮▮▮▮" appears in the display. "DBFB ▮▮▮▮" is more effective than "DBFB ▮▮".

display off → DBFB ▮▮ → DBFB ▮▮▮▮

* DBFB = Dynamic Bass Feedback

If you use the DBFB System with the graphic equalizer
If the bass is too strong, the music will sound distorted. Adjust the bass slowly while listening to music so that you can monitor the effect of the adjustment.

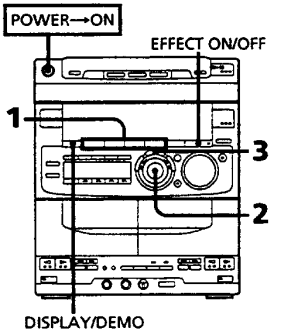
To get a powerful sound (GROOVE)
Press GROOVE.
The volume switches to power mode, DBFB is automatically set to full strength, the equalizer curve changes and the "GROOVE" button lights up. Press GROOVE again to return to the previous volume.

Note
Cancelling GROOVE does not cancel the DBFB level or equalizer curve.
To cancel the DBFB level, press DBFB repeatedly until "DBFB ▮▮▮▮" or "DBFB ▮▮" dissapears from the display. Adjust the equalization to obtain the effect you desire.

To listen through the headphones
Connect the headphones to PHONES jack. No sound will come from the speakers.

Selecting The Audio Emphasis

Your stereo system is provided with 20 different preset effects (music menu) created from different graphic equalizer and surround effect settings.
With the press of a single button, you can choose between a variety of effects according to musical genre or use. The personal file function (see page 21) lets you store your own effects.



1 Press one of the MENU buttons (or MUSIC MENU ▲/▼ on the remote repeatedly to select MENU).
See the chart "Music menu options" on the following page. The last effect chosen from that menu appears in the display.

2 Use the JOG dial (or press MUSIC MENU ◀/▶ on the remote repeatedly) to select the preset you desire.
The preset name appears in the display.

3 Press ENTER/NEXT.

To cancel the effect
Press EFFECT ON/OFF (or MUSIC MENU ON/OFF on the remote) so that "EFFECT OFF" appears in the display.

continue to next page →

→ continued

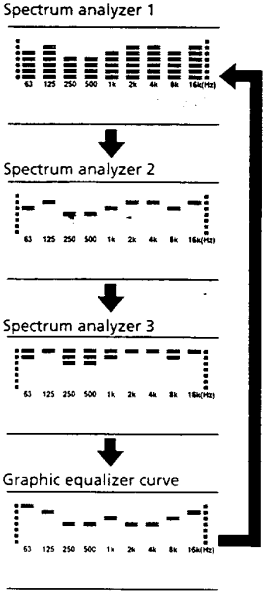
Music menu options

"SUR 1 ▮▮▮▮▮▮" or "SUR 2 ▮▮▮▮▮▮" appears if you select an effect with surround effect.

MENU button	Effect	For
MENU 1	ROCK POPS JAZZ CLASSIC DANCE	standard music sources
MENU 2	SALSA REGGAE BALLADE OLDIES SOUL	
MENU 3	GAME MOVIE NIGHT MORNING PARTY	listening situations
MENU 4	L.HALL STADIUM STUDIO CHURCH CLUB	special listening situations

To change the equalizer display

Each time you press and hold down DISPLAY/DEMO for a few seconds, the equalizer display changes to show one of the four displays below.

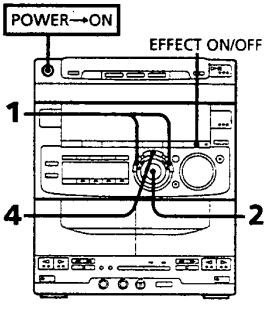


Adjusting the Audio Emphasis

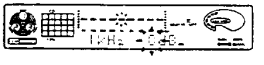
You can adjust the audio emphasis using the following two functions:
- Graphic Equalizer
- Surround Effect

Adjusting the Sound (graphic equalizer)

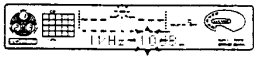
You can adjust the sound by raising or lowering the levels of specific frequency ranges.
Before operation, first select the audio emphasis you want for your basic sound.



1 Press FREQUENCY + or – to select a frequency band.



2 Turn the JOG dial to adjust level.



3 Repeat steps 1 and 2.

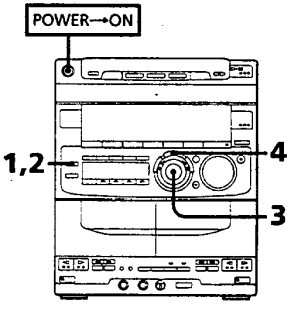
4 Press ENTER/NEXT when finished.
The equalizer dissapears from the display but you can hear the effect of the adjustments.

Note

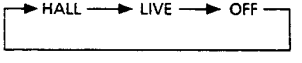
If you choose another menu audio emphasis (other than "EFFECT OFF") the adjusted sound effect is lost. To retain the adjusted sound effect for future use, store it in a personal file. (See "Making a Personal Audio Emphasis File (personal file)".)

Activating the Sound Field (surround effect)

You can adjust the surround effect. First select from two types of programmed surround effects according to the type of software you have.



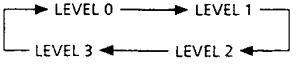
1 Press DSP repeatedly until your desired surround effect appears in the display.



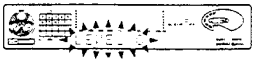
HALL (SUR 1 ▮▮▮▮▮▮)	You can hear the naturally acoustic sound having a reverberation effect that is produced in a large-size concert hall.
LIVE (SUR 2 ▮▮▮▮▮▮)	You can feel such a sense of presence as if you were in a live concert.

2 Press and hold down DSP for more than a second.

3 Turn the JOG dial to choose the surround level you want.
The display changes as follows:



Surround effect is stronger in the order of LEVEL 0, LEVEL 1, LEVEL 2 and LEVEL 3.



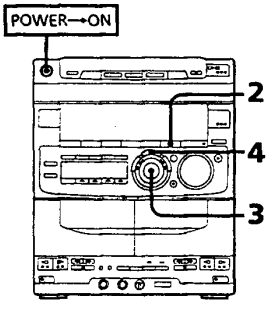
4 Press ENTER/NEXT.

Note

When you choose other sound effects, the surround effects will be canceled. If you want to memorize the effect, store it into a personal file (see "Making a Personal Audio Emphasis File (personal file)").

Making a Personal Audio Emphasis File (personal file)

You can create a personal file of audio patterns (surround effect and graphic equalizer) and store them in the memory of the unit. Later call up an audio pattern to play a favorite tape, CD, or radio program. Create up to five audio files.
Before operation, first select the audio emphasis you want for your basic sound.



1 Obtain the sound effect you want by using the graphic equalizer and surround effect.

2 Press and hold down P FILE for more than a second.
The personal file number appears in the display.

3 Use the JOG dial to select the file number (P FILE) where you want to store the sound effect.

4 Press ENTER/NEXT.
The adjusted sound effects are stored under the selected file number. The settings previously stored at this memory location are erased and replaced by the new settings.

To call up the personal file

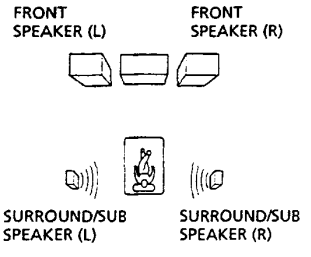
1 Press P FILE (or MUSIC MENU ▲/▼ on the remote).
The last selected personal file appears in the display.
2 Use the JOG dial (or press MUSIC MENU ◀/▶ on the remote) to select the personal file you desire.
3 Press ENTER/NEXT.

Switching the Speaker Formation (sonic formation)

In addition to the four-speaker system, you can select the speaker formation from two modes depending on your listening situation.

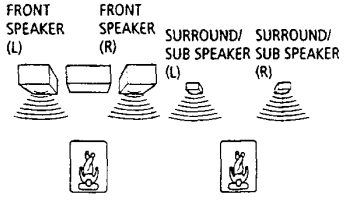
WHISPER mode

The sound from the front speakers is cut off and output from the surround/sub speaker with its sound decreased. For instance, when you want to listen to the sound in bed, it is suitable setting the surround/sub speakers on either side of the bed.



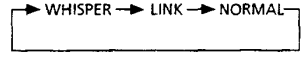
LINK mode

The same sound is output from the front speakers and surround/sub speakers. For instance, when you want to listen to the same sound in two rooms, it is suitable to set the front speakers and the surround/sub speakers in each room.



To select the formation mode

Press SONIC FORMATION repeatedly until the mode you want appears in the display.
As you press SONIC FORMATION, the mode changes as follows:



To return to the normal mode

Press SONIC FORMATION repeatedly until "NORMAL" appears in the display.

Chapter 6:

Additional Features

Falling Asleep to Music

Waking up to Music

Timer-Recording Radio Programs

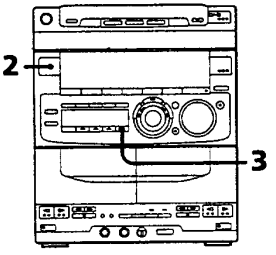
Microphone Mixing

Karaoke: Singing Along

Connecting Optional Equipment

Falling Asleep to Music

You can set the stereo system to turn off automatically so you can go to sleep to music (sleep timer).
You can set the sleep timer even if you have already set the wake-up timer or timer-recording.
Before setting the sleep timer, make sure the clock has been set correctly.

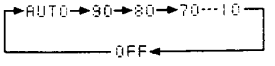


1 Play your favorite sound source (a tape, the tuner or a CD).

2 Press TIMER.

3 Press SLEEP while the source is playing to choose how long you want the music to play.
"SLEEP" and minutes indication appear in the display. As you press SLEEP, the indication decreases by ten minutes from 90 to 10.

The power will turn off after 90 to 10 minutes depending on the length of time you chose.



When you choose AUTO
The power turns off when the current CD or tape finishes playback (for up to 100 minutes).
The power turns off, even if you pause the tape or stop playing CD or tape.

To cancel the sleep timer
Press SLEEP on the remote repeatedly until "OFF" appears in the display.

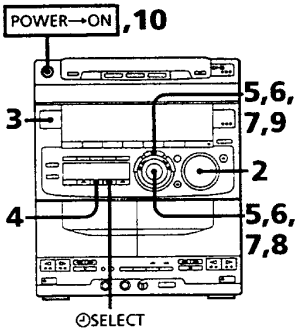
To check the remaining time before the sleep timer turns off the system
Press SLEEP on the remote once.
The remaining time is displayed in minutes for several seconds.

To change the remaining time while the sleep timer is on
Press SLEEP on the remote several times until the desired length of time indication appears.

Note
While the sleep timer is activated, the daily and recording timer functions do not work.

Waking Up to Music

You can wake up to music at the preset time. You only need to set the timer once. Before setting the timer, made sure the clock has been set correctly. The preset timer activates at the same time every day. To wake up to the sound of the radio, be sure to preset the station you want to listen to beforehand. (See "Presetting Radio Stations".)



1 Prepare the sound source.

To wake up to the radio
Tune in the preset station you want.

To wake up to a CD
Insert a CD. If you want to play it from a desired track, do the necessary procedures for programmed CD play. (see "Playing Tracks in the Desired Order (program play)".)

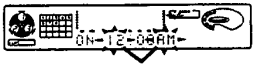
To wake up to a tape
Insert the tape with the side you want to play facing forwards you. If you insert the tapes in both decks, you will hear the sound from deck A.

2 Turn VOLUME to adjust the volume.
The music will start playing with the adjusted volume when the preset time comes.

3 Press TIMER.

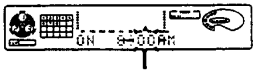
4 Press ⏲ SET.

5 Use the JOG dial to select either DAILY 1 or 2 and press ENTER/NEXT.
"ON" appears and the hour digits flash in the display.



flashing

6 Use the JOG dial to set the hour you want the system to turn on and press ENTER/NEXT.
Set the minutes in the same way. "OFF" appears and the hour digits flash in the display.

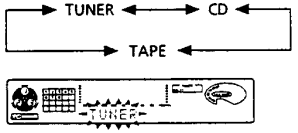


flashing

flashing

7 Use the JOG dial to set the hour you want the system to turn off and press ENTER/NEXT.
Set the minutes in the same way.

8 Use the JOG dial to select a sound source.
The display changes as follows:



9 Press ENTER/NEXT.
The preset items appear in the display sequentially.

10 Press POWER to turn off the system.
The power will go on at the preset time and the music will play with the volume you have adjusted. At the turn-off time, the power will go off again.

To change the preset timer settings
Start over from step 1.

To check the preset timer settings
1 Press TIMER.
2 Press ⏲ SELECT and use the JOG dial to choose the mode you want to check.
3 Press ENTER/NEXT.
The preset items appear in the display sequentially, then the original display returns.

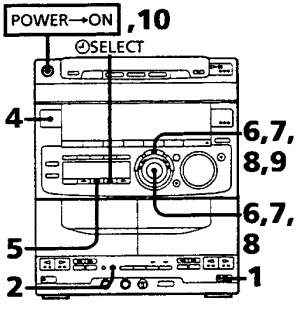
To change the timer
Select the timer display you desire in step 2 of "To check the preset timer settings".

To cancel the timer
1 Press TIMER.
2 Press ⏲ SELECT and use the JOG dial to choose "TIMER OFF."
3 Press ENTER/NEXT.
The next time you want to use the timer, select the timer display you used in step 2 (DAILY1 or DAILY 2) and press ENTER/NEXT.

Notes
- You cannot set the timer if the timer ON and OFF times are the same.
- You cannot activate wake-up timer and timer-recording at the same time.

Timer-Recording Radio Programs

You can set the timer to record from the radio at a certain time. This timer works only once for each setting.
Make sure the clock has been set correctly.



1 Press ⏏ EJECT and insert a blank tape in deck B with the side you want to record on facing forward.

2 Select dual or single-sided recording.

To record	Press DIRECTION to select
One side of the tape	⇉
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

3 Tune in a station you want to record.

4 Press TIMER.

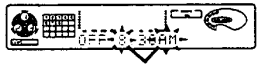
5 Press ⏲ SET.

6 Use the JOG dial to select REC and press ENTER/NEXT.
"ON" appears and the hour digits flash in the display.

flashing

7 Use the JOG dial to set the hour you want the system to turn on and press ENTER/NEXT.
Set the minutes in the same way. "OFF" appears and the hour digits flash in the display.

flashing



flashing

8 Use the JOG dial to set the hour you want the system to turn off and press ENTER/NEXT.
Set the minutes in the same way.

9 Press ENTER/NEXT.
The preset items appear in the display sequentially.

10 Press POWER to turn off the system.
The power comes 15 seconds before the preset time on and the volume level is automatically set to the minimum.

To check the preset times settings
1 Press TIMER.
2 Press ⏲ SELECT and use the JOG dial to select "REC".
3 Press ENTER/NEXT.
The preset items appear in the display sequentially, then the original display returns.

To change the preset timer settings
Start over from step 1.

To cancel the timer
1 Press TIMER.
2 Press ⏲ SELECT and use the JOG dial to choose "TIMER OFF."
3 Press ENTER/NEXT.
The timer indicators disappear from the display.

When a power interruption occurs for longer than half a day
The clock and timer settings are all erased, and "12:00 AM" will flash in the display.

continue to next page →

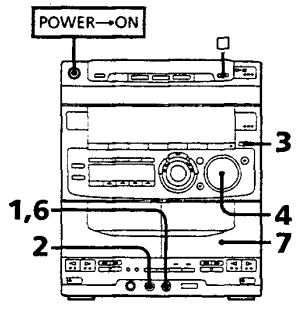
→ continued

If the power is on at the preset time
The sound source will automatically change to the tuner, but tuner recording will not start.

Notes
- You cannot set the timer if the timer ON and OFF times are the same.
- You cannot activate timer-recording and wake-up timer at the same time.

Microphone Mixing

You can "mix" sounds by playing one of the components and singing or speaking into a microphone (not supplied). The mixed sounds can then be recorded on a tape.



1 Turn MIC LEVEL to MIN to turn down the microphone control level.

2 Connect a microphone at the MIX MIC jack.

3 Press FUNCTION several times to select a sound source and play it.

4 Adjust VOLUME.
If you hear acoustic feedback, move the microphone away from the speakers or change the direction of the microphone.

5 Sing or speak into the microphone.

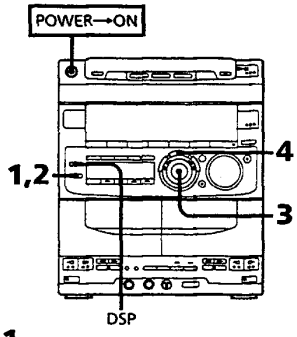
6 Adjust MIC LEVEL.

7 If you want to record mixed sound, insert a tape in deck B and start recording.

To record from the microphone only
1 Press FUNCTION repeatedly until "CD" appears in the display. If a CD is being played, press □ on the CD player to stop playing.
2 Start recording.
3 Sing or speak into the microphone.

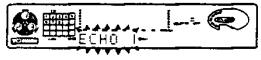
When you finish mixing
Turn the MIC LEVEL control to MIN and disconnect the microphone.

Echoing the Microphone Sound

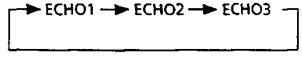


1 Press DIGITAL ECHO.
ECHO ON appears in the display.

2 Press and hold down DIGITAL ECHO for more than a second.
ECHO level flashes in the display.



3 Turn the JOG dial to choose the ECHO level you want.
The display changes as follows:



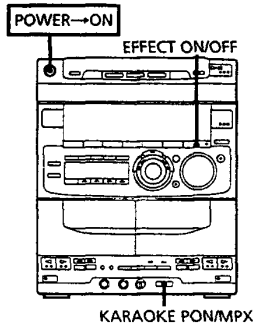
Echo effect is stronger in the order of ECHO 1, ECHO 2 and ECHO 3.

4 Press ENTER/NEXT.

To cancel the echoing
Press DIGITAL ECHO until ECHO OFF appears in the display.

Note
Surround effect is canceled when the DIGITAL ECHO is on. The surround effect does not automatically return to the previous setting when the DIGITAL ECHO is turned off. Press DSP button to set up surround effect again.

Karaoke: Singing Along



To Reduce the Vocals (Karaoke pon)

You can minimize the singer's voice, "vocal reduction," so you can sing along with any stereo CD or tape. When you want to record the sound of the CD or tape and your voice, operate as shown the steps below.

To reduce the vocals
Press KARAOKE PON/MPX so that "🎤 PON" appears in the display.
To cancel vocal reduction, press KARAOKE PON/MPX repeatedly so that "🎤 PON", "🎤 MPX R"or "🎤 MPX L" disappear from the display.

If you press EFFECT ON/OFF or recall a sound effect with the MENU buttons
The karaoke mode is cancelled.

Notes on vocal reduction
The singer's voice may not be reduced completely for the following reasons:
- Monaural recorded source (Instruments may also be reduced.).
- Only a few instruments are playing in the stereo recorded source.
- A duet is being played.
- The source has strong echoes or chorus.
- The singer's voice on the source deviates from the center.
- The voice on the source is singing in high soprano or tenor.

To Sing Along with Multiplex CDs or Tapes

You can sing along using the microphone while playing a multiplex CD or tape.

Press KARAOKE PON/MPX repeatedly until "🎤 MPX R" or "🎤 MPX L" appears in the display (choose right (R) or left (L) according to the encoding on your MPX software).
Then, you can hear your voice through the microphone and the instruments.

To hear both channels (the instruments and the recorded singer's voice)
Press KARAOKE PON/MPX repeatedly so that "🎤 MPX", "🎤 MPX R"or "🎤 MPX L" disappear from the display.

If you press EFFECT ON/OFF or recall a sound effect with the MENU buttons
The karaoke mode is cancelled.

Connecting Optional Equipment

For greater enjoyment of your stereo system, you can connect other components to the stereo. You can connect:

- an MD recorder
- a CD player
- a VCR
- headphones
- a turntable
- a super woofer

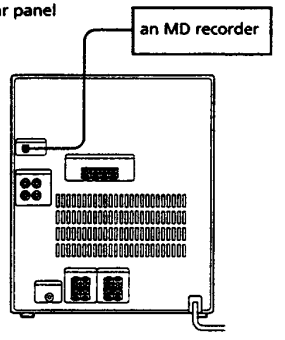
Connecting an MD Recorder

Select one of the following two connections, depending on the equipment to be connected and the method of recording.

- an MD recorder for digital recording
- an MD recorder for analog recording

To connect an MD recorder for digital recording
You can record from the CD into the MD recorder digitally.

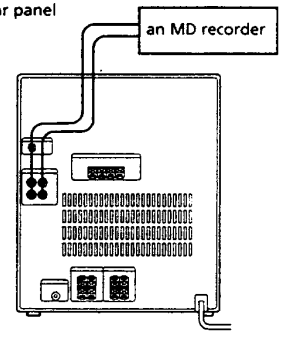
rear panel



Connect	With
Digital IN jack of the MD recorder	CD DIGITAL OUT OPTICAL using an optical cable

To connect an MD recorder for analog recording
You can record from the sound sources of the stereo into the MD recorder in analog sound.
You can also listen to the sound from the MD recorder by pressing FUNCTION repeatedly to select 100 CD.

rear panel



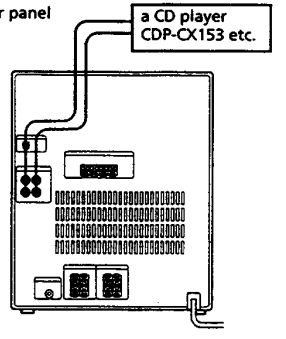
Connect	With
LINE IN jack of the MD recorder	100 CD/VIDEO OUT jacks
LINE OUT jack of the MD recorder	100 CD/VIDEO IN jacks

Use audio cords and make sure to connect the plugs to jacks of the same color.
Then press FUNCTION to select 100 CD.

Connecting a CD player

You can connect an optional CD player that can insert up to 100 discs and hear the sound through the connected speakers. The optional CD player: CDP-CX153 is recommended.

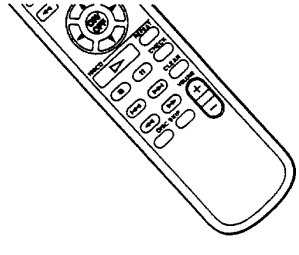
rear panel



Connect	With
LINE OUT jacks of the CD player	100 CD/VIDEO IN jacks

Use audio cords and make sure to connect the plugs to jack of the same color. Then press FUNCTION repeatedly to select 100 CD.

To control the optional CD player with the supplied remote
You can use the supplied remote to operate the optional CD player. Buttons on the 100 CD section of the suppplied remote can be used to operate the recommended optional CD player.
Set the COMMAND MODE selector of the optional CD player to CD2.



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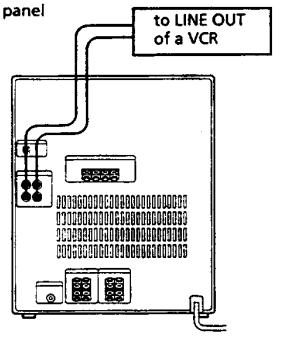
Connecting a VCR

You can connect a VCR and hear the sound through the connected speakers.

rear panel



Connect	With
LINE OUT jacks of the VCR	100 CD/VIDEO IN jacks

Press FUNCTION repeatedly to select VIDEO.

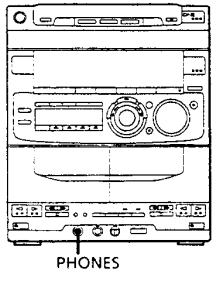
Note

If you cannot select "VIDEO" even when you have pressed FUNCTION, press POWER while press and hold down FUNCTION when the power is turned off. "100 CD" will be switched to "VIDEO". To return to "100 CD", do the same procedures.

Connecting Headphones

You can connect the headphones (stereo phone jack) to the PHONES jack.

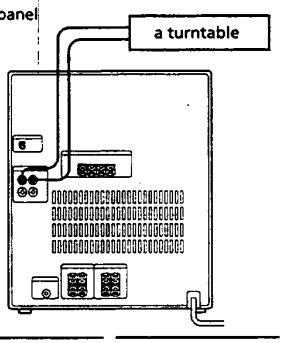
front panel



Connecting a Turntable

You can connect a turntable to 100 CD/VIDEO IN jacks.
Before you connect, check which type of turntable you have.

rear panel



Is the turntable supplied with a phono equalizer?	Connect with
Yes	100 CD/VIDEO IN jacks
No	100 CD/VIDEO IN jacks using a MM cartridge equalizer and connecting cable (not supplied)

Press FUNCTION to select VIDEO.

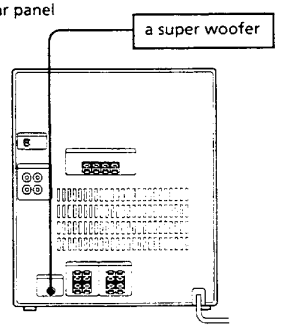
Note

If you cannot select "VIDEO" even when you have pressed FUNCTION, press POWER while press and hold down FUNCTION when the power is turned off. "100 CD" will be switched to "VIDEO". To return to "100 CD", do the same procedures.

Connecting a Super Woofer

You can connect a super woofer to SUPER WOOFER jack.

rear panel



For Your Information

Precautions

Troubleshooting Guide

Maintenance

Specifications

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Precautions

If you have any questions or problems concerning your stereo system, please consult your nearest Sony dealer.

On safety

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Unplug the system from the AC power outlet if it is not to be used for an extended period of time. To disconnect the AC power cord, pull it out by the plug. Never pull the cord itself.
- Should any solid object or liquid fall into the component, unplug the stereo system and have the component checked by qualified personnel before operating it any further.
- AC power cord must be changed only at the qualified service shop.

On installation

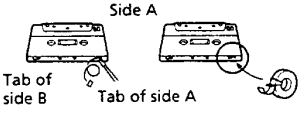
Place the stereo system in a location with adequate ventilation to prevent heat build-up in the stereo system.

On condensation in the CD player component

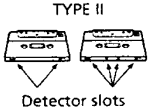
If the system is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the CD player. Should this occur, the CD player will not operate. Remove the CD and leave the system turned on for about an hour until the moisture evaporates.

To save a tape permanently

To prevent a tape from being accidentally recorded over, break off the cassette tab from side A or B as illustrated. If you later want to reuse the tape for recording, cover the broken tab with adhesive tape.



When you are using a TYPE II (CrO_2) or TYPE IV (metal) cassette, be careful not to cover the detector slots which allow the tape player to automatically detect the type of tape.



In case color irregularity is observed on nearby TV screen

With the magnetically shielded type of speaker system, the speakers can be installed near a TV set. However, color irregularity may still be observed on the TV screen depending on the type of your TV set.

If color irregularity is observed...

Turn off the TV set once, then turn it on after 15 to 30 minutes.

If color irregularity is observed again...

Place the speakers farther away from the TV set.

Troubleshooting Guide

If you run into any problem using this stereo system, use the following check list. And first check the following points:

- The power cord is connected firmly.
- The speakers are connected correctly and firmly.

Should any problem persist after you have made the checks below, consult your nearest Sony dealer.

Tuner

"TUNED" flashes in the display.

→ Adjust the antenna.

"STEREO" flashes in the display.

→ Adjust the antenna.

Severe hum or noise.

→ Adjust the antenna.
→ The signal strength is too weak. Connect the external antenna.
→ Connect the ground wire.

A stereo FM program cannot be received in stereo.

→ Press STEREO so that "STEREO" appears.

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→ continued

Tape Player

The tape does not record.
→ No tape in the cassette holder.
→ The tab has been removed from the cassette.
→ The tape has reeled to the end.

The tape does not record nor playback or there is a decrease in sound level.
→ The heads are dirty. Clean them.*
→ Magnetic deposits have built-up on the record / playback heads.*

There is excessive wow or flutter, or the sound drops out.
→ The capstans or pinch rollers are contaminated.*

The tape does not erase completely.
→ Magnetic deposits have built-up on the record / playback heads.*

Noise increases or the high frequencies are erased.
→ Magnetic deposits have built-up on the record / playback heads.*

* See "Maintenance."

CD Player

The disc tray does not close.
→ The CD is not placed correctly.

The CD will not play.
→ The CD is dirty.
→ The CD is inserted label side down.
→ The player is in pause mode.
→ Moisture condensation has built up.
Leave the system turned on for about an hour until the moisture evaporates.

"CD NO DISC" is displayed.
→ There is no CD in the player.

Play does not start from the first track.
→ The player is in program or shuffle mode. Press PLAY MODE so that "PROGRAM" or "SHUFFLE" goes out.

General

There is no sound.
→ Rotate VOLUME clockwise.
→ The headphones are connected. Disconnect them.

Sound comes from one channel or unbalanced left and right volume.
→ Check the speaker connections of the inoperative channel.

The left and right sound are reversed.
→ Check the speaker connection and speaker placement.

Bass is lacking or the location of the musical instruments is apparently imprecise.
→ Check the speaker connection for proper phasing.

There is severe hum or noise.
→ A TV or VCR is too close to the stereo system. Move the stereo system away from the TV or VCR.

"12:00 AM" flashes in the display.
→ A power interruption occurred. Set the clock and timer settings again.

The remote does not function.
→ The batteries have run down. Replace both batteries.
→ There is an obstacle between the remote and the system. Remove the obstacle.

Restoring the factory settings

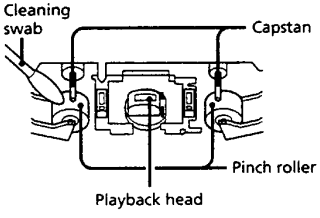
1 Turn POWER off.
2 Hold down DISPLAY / DEMO, TUNER / BAND and MENU 3 at the same time.

Maintenance

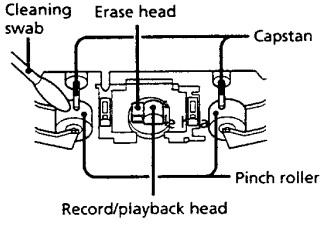
To clean the tape heads and tape path
Contaminated tape heads cause poor recording or sound drop-out in playback. We recommend cleaning after every 10 hours of operation.

Open the tape compartment and wipe the heads, the pinch rollers and the capstans with a cleaning swab slightly moistened with cleaning fluid or alcohol. Wipe the parts shown below:

Deck A



Deck B



Insert a tape when the areas cleaned are completely dry.

To demagnetize the tape heads
After 20 to 30 hours of use, enough residual magnetism will have built up on the heads to begin to cause loss of high frequencies and hiss. At this time, demagnetize the heads and all metal parts in the tape path with a commercially available tape head demagnetizer. Refer to the instructions of the demagnetizer.

To clean the cabinet
Use a soft cloth slightly moistened with mild detergent solution.

To clean the CD
When a CD is dirty, clean it with a cleaning cloth. Wipe the CD from the center out.

Notes on CD
- Do not use solvents such as benzene, thinner, commercially available cleaners, or antistatic spray intended for vinyl LPs.
- If there is a scratch, dirt or fingerprints on the CD, it may cause a tracking error.

Specifications

For the U.S. model
AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 8 ohm loads, both channels driven, from 40 – 20,000 Hz; rated 100 watts per channel minimum RMS power, with no more than 0.9% total harmonic distortion from 250 milliwatts to rated output.

CD player section

System: Compact disc and digital audio system
Laser: Semiconductor laser
Laser output: Max. 44.6 μW*
* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Frequency response: 2 Hz – 20 kHz (±0.5 dB)
Wavelength: 780 – 790 nm
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB
CD OPTICAL DIGITAL OUT
(Square optical connector jack, rear panel)
Wavelength: 600 nm
Output Level: –18 dBm

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range: 87.5 – 108.0 MHz (100 kHz step)
Antenna: FM lead antenna
Antenna terminals: 75 ohm unbalanced
Intermediate frequency: 10.7 MHz

AM tuner section

Tuning range: 531 – 1,710 kHz (with the tuning interval set at 9 kHz)
530 – 1,710 kHz (with the tuning interval set at 10 kHz)
Antenna: AM loop antenna, External antenna terminals
Intermediate frequency: 450 kHz

Amplifier section

Continuous RMS power output
U.S. model: 100 W + 100 W (8 ohms at 40 – 20,000Hz, 0.9 % THD)
Canadian model: 120 W + 120 W (8 ohms at 1 KHz, 5 % THD)
Inputs
100 CD/VIDEO IN (phono jacks): voltage 450 mV, impedance 47 kilohms
MIX MIC (phone jacks): sensitivity 1 mV, impedance 10 kilohms
Outputs
100 CD/VIDEO OUT (phono jacks): voltage 250 mV impedance 1 kilohms
PHONES (stereo phone jack): accepts headphones of 8 ohms or more.
SPEAKER: accepts impedance of 8 to 16 ohms.
SURROUND/SUB SPEAKER: accepts impedance of 16 ohms.
SUPER WOOFER: Voltage 1 V, impedance 1 kilohms

Tape player section

Recording system: 4-track 2-channel stereo
Frequency response
(DOLBY NR OFF)
40 – 13,000 Hz (±3 dB), using Sony TYPE I cassette
40 – 14,000 Hz (±3 dB), using Sony TYPE II cassette
Wow and flutter
±0.15% W. PEAK (IEC)
0.1% W. RMS (NAB)
±0.2% W. PEAK (DIN)

Speaker

SS-H991

Speaker system: 3-way, 3-unit, bass-reflex type
Speaker units
Woofer: 17 cm dia., cone type
Tweeter: 5 cm dia., cone type
Super Tweeter: 2 cm dia., dome type
Nominal impedance: 8 ohms
Dimensions: Approx. 220 × 325 × 275 mm (8 3/4 × 12 7/8 × 10 7/8 in) (w/h/d)
Mass: Approx. 5 kg (11 lb) per speaker

SS-SR10P(Canadian model)

Speaker system: Full range
Speaker units: 10 cm dia., cone type
Enclosure type: Closed
Rated impedance: 16 ohms
Dimensions: Approx. 125 × 160 × 110 mm (w/h/d) (5 × 6 3/8 × 4 3/8 in) (w/h/d)
Mass: Approx. 700 g (1 lb 8 0z) per speaker

SS-SR991(U.S.model)

Speaker system: Full range system, bass reflex type
Speaker unit: 10 cm dia., cone type
Nominal impedance: 16 ohms
Dimensions: Approx. 200 x 90 x 235 mm (7 7/8 x 3 5/8 x 9 3/8 in) (w/h/d)
Mass: Approx.1 kg (2 1b 4 oz) per speaker

Supplied accessories

AM loop antenna (1)
Remote RM-SC100F (1)
Sony SUM-3 (NS) batteries (2)
FM lead antenna (1)
Speaker cords (4)

General

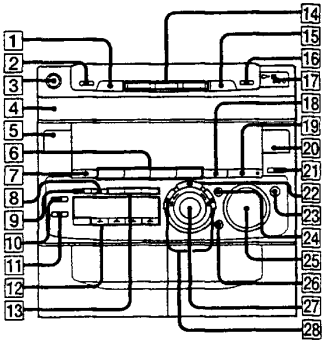
Power requirements
120 V AC, 60 Hz
Power consumption
U.S. model: 275 W
Canadian model: 300 VA
Dimensions: Approx. 280 × 325 × 360 mm (11 1/8 × 12 7/8 × 14 1/4 in) (w/h/d) incl. projecting parts and controls
Mass: Approx. 10 kg (22lb)

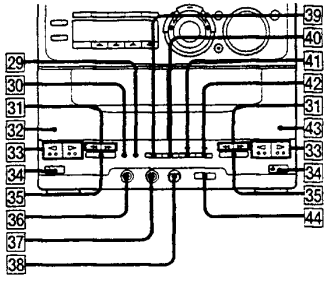
Design and specifications are subject to change without notice.

Index to Parts and Controls

Refer to the pages indicated in parentheses for details on how to use the controls. Controls with an asterisk have indicators on themselves.

Front Panel



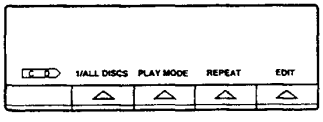


1 DISC SKIP EX-CHANGE button (7)
2 LOOP button (10)
3 POWER switch (7)
4 Disc tray (7)
5 TIMER button (22)
6 MENU 1 – 4 button (19)
7 DISPLAY/DEMO button (5, 6, 19, 28)
8 CLIP ERASE button (10)
9 CLIP PLAY button (10)
10 DSP button* (20)
11 DIGITAL ECHO button* (24)
12 MULTI FUNCTION CONTROL buttons (30)
13 CLIP A – C button* (10)
14 DISC 1 – 3 button* (7)
15 ⏏ OPEN/CLOSE button (7)
16 □ (stop) button (7)
17 ▷II (play / pause) button* (7)
18 P FILE button (21)
19 EFFECT ON/OFF button* (19, 20, 24)
20 TUNER/BAND button* (12, 17)
21 FUNCTION button (8, 24, 25)
22 ENTER/NEXT button (9)
23 GROOVE button* (19)
24 DBFB button (19)
25 VOLUME control (19)
26 SONIC FORMATION button* (21)
27 JOG dial (7)
28 FREQUENCY +/– buttons (20)
29 DIRECTION button (14)
30 DOLBY NR button (14)
31 ◁◁/▷▷ (rewind/fast forward) button* (14)
32 Deck A (14)
33 ◁/▷ (reverse side play/front side play) button* (14)
34 ⏏ EJECT button (14)
35 □ (stop) button (14)
36 PHONES jack (19, 26)
37 MIX MIC jack (24)
38 MIC LEVEL knob (24)
39 HIGH SPEED DUBBING button (18)
40 CD SYNCHRO button (15)
41 O REC button* (15)
42 II PAUSE button* (15)
43 Deck B (14)
44 KARAOKE PON/MPX button (24)

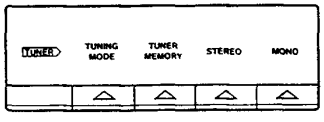
MULTI FUNCTION CONTROL buttons

The buttons you can operate the CD player, tuner and the timer light up.

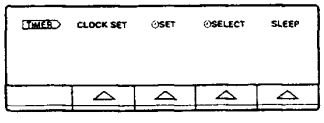
CD player



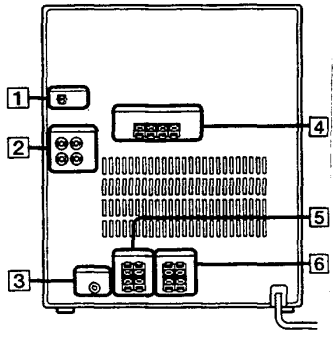
Tuner



Timer

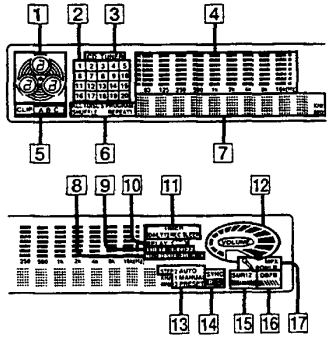


Rear panel



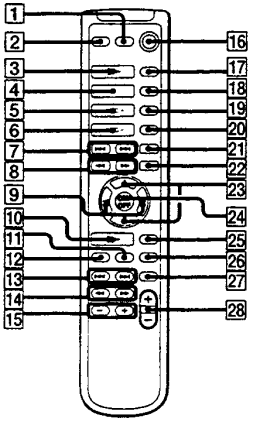
1 CD DIGITAL OUT OPTICAL jack (25)
2 100 CD/VIDEO IN/OUT jacks (25)
3 SUPER WOOFER jack (26)
4 ANTENNA terminals (4)
5 SURROUND SPEAKER L/R connectors (4)
6 SPEAKER L/R connectors (4)

Display Window



1 Disc tray indicator
2 Music calendar (7)
3 CD/TUNER indicator (7, 12)
4 Graphic Equalizer indicator (20)
5 CLIP indicators (10)
6 CD playback indicators (8, 9)
7 Multi display
8 Tuning indicator (12)
9 DOLBY NR indicator (15)
10 Directon mode indicators (14)
11 Timer indicators (22, 23)
12 VOLUME indicators
13 Tuner indicators (12, 13)
14 SYNC REC indicator
15 SUR 1/2 indicators (20)
16 DBFB indicator (19)
17 Karaoke PON/MPX indicators (24, 25)

Remote



1 FUNCTION button (24, 25)
2 SLEEP button (22)
3 ▷ (CD) button (7)
4 TUNER/BAND button (12)
5 DECK A ◁/▷ button (14)
6 DECK B ◁/▷ button (14)
7 ⏮/⏭ AMS* (CD)/TUNING −/+ buttons (7)
8 ◀◀/▶▶ (CD) buttons (8)
9 ◀/▶buttons (19, 21)
10 ▷ (100 CD) button
11 ■ (stop) button
12 ❚❚ (pause) button
13 ⏮/⏭ AMS* (100 CD) buttons
14 ◀◀/▶▶ (100 CD) buttons
15 DISC SKIP −/+ (100 CD) button
16 POWER button (7)
17 LOOP button (10)
18 CHECK (CD) button (16)
19 CLEAR (CD) button (9)
20 D.SKIP button
21 ■ (stop) button (7)
22 ❚❚ (pause) button (7)
23 ▲/▼ buttons (19, 21)
24 MUSIC MENU ON/OFF button (19)
25 REPEAT button
26 CHECK (100 CD) button
27 CLEAR (100 CD) button
28 VOLUME +/− button (19)

* AMS=Auto Music Sensor

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